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Professor JP Donnelly
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Dear Professor Donnelly

We are grateful for Professor Pulcini's interest in our paper and for her comments highlighting the limitations of the use of Defined Daily Dosage (DDD) as a standardised measure of volume of antibiotic consumption. The data on which our analysis was based were derived from the European Centre of Disease Control which currently uses DDD to record antibiotic consumption. The data do not include information on duration of consumption. We acknowledge that DDDs have some limitations, particularly in relation to antibiotic consumption in children. We note the evidence from McNeilly et al that a temporal rise in antibiotic volumes in Scotland was explained mainly by rising DDDs, and the report by Forst et al that DDDs overestimated prescribing volumes in German hospitals.(1,2)

Professor Pulcini made the important observation that duration of treatment (DoT) may be independently associated with the development of antimicrobial resistance at a national level. It is likely that there are national differences in the conventions governing duration of antibiotic prescribing for different types of infection resulting in variation at national level in DoT. At present, we have no European data to monitor the role of DoT. These differences may explain some of the disparities we observed in our paper. In addition, consumption of antibiotics may be less predictable, and DDDs may be less reliable, as prescribers of antibiotics become less doctrinaire about the need to complete a course.(3)

Future analysis of the association at national level between community antimicrobial consumption and resistance in invasive specimens should consider the role of duration of consumption.

Yours sincerely

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The authors declare no competing interests.

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